

IN THE CLAIMS:

Claim 1 has been amended as follows:

1. (Currently Amended) A nuclear magnetic resonance antenna comprising:

a plurality of at least five antenna elements disposed in a plane for emitting or receiving magnetic field energy at a magnetic resonance frequency, each antenna element having an element beginning in said plane and an element end in said plane;

said antenna elements being disposed relative to a center axis so as to radiate from the respective element beginnings to the respective element ends outwardly in a spoke-like fashion to allow a radially directed current flow in each antenna element between the element end thereof and the element beginning thereof, and exhibiting cyclical symmetry from antenna element to antenna element;

said antenna elements being at least magnetically coupled with each other in said antenna.

2. (Original) A nuclear magnetic resonance antenna as claimed in claim 1, wherein the respective element beginnings and the respective element ends are connected to ground.

3. (Original) A nuclear magnetic resonance antenna as claimed in claim 1 wherein said antenna elements are electrically coupled to each other.

4. (Original) A nuclear magnetic resonance antenna as claimed in claim 3 wherein the respective element beginnings are electrically connected to each other via a ring-shaped connecting element.

5. (Original) A nuclear magnetic resonance antenna as claimed in claim 3 wherein the respective element ends are electrically connected to each other via a ring-shaped connecting element.

6. (Original) A nuclear magnetic resonance antenna as claimed in claim 3 wherein the respective element beginnings are electrically connected to each other via a first ring-shaped connecting element and wherein the respective element ends are electrically connected to each other via a second ring-shaped connecting element.

7. (Original) A nuclear magnetic resonance antenna as claimed in claim 1, wherein each of said antenna elements has two branching element ends.

8. (Cancelled).

9. (Previously Amended) A nuclear magnetic resonance antenna as claimed in claim 1 wherein the respective antenna elements are linear.

10. (Cancelled).

11. (Previously Amended) A nuclear magnetic resonance antenna as claimed in claim 14 further comprising a grounding plate disposed parallel to said element beginning plane and said element end plane, and said common point being disposed in said grounding plate.

12. (Previously Amended) A nuclear magnetic resonance antenna as claimed in claim 14 further comprising a grounding plate disposed parallel to said element beginning plane and said element end plane.

13. (Previously Amended) A nuclear magnetic resonance antenna as claimed in claim 1 wherein said plurality is divisible by four.

Claim 14 has been amended as follows:

14. (Currently Amended) A nuclear magnetic resonance antenna comprising:

a plurality of at least five antenna elements for emitting or receiving magnetic field energy at a magnetic resonance frequency, each antenna element having an element beginning and an element end, the respective

element beginnings defining an element beginning plane and the respective elements ends defining an element end plane, said element beginning plane and said element end plane being parallel to and spaced from each other;

said antenna elements being disposed relative to a center axis so as to radiate from the respective element beginnings to the respective element ends to allow a radially directed current to flow in each antenna element between the element end thereof and the element beginning thereof, and exhibiting cyclical symmetry from antenna element to antenna element;

the respective antenna elements being linear and three-dimensionally straight to define respective line directions, said line directions intersecting said center axis at a common point outside of said element beginning plane and outside of said element end plane; and

said antenna elements being at least magnetically coupled with each other in said antenna.

Claim 15 has been amended as follows:

15. (Currently Amended) A nuclear magnetic resonance antenna as claimed in claim 14 ~~herein~~ wherein the respective element beginnings are electrically connected to each other via a first ring-shaped connecting element and wherein the respective element ends are electrically connected to each other via a second ring-shaped connecting element.

16. (Previously Added) A nuclear magnetic resonance antenna as claimed in claim 14 wherein said plurality is divisible by four.